

Amendments to the Specification:

Please replace the Sequence Listing with the one submitted herewith.

Please insert the following paragraph at page 4, before the paragraph beginning at line 23.

In the remainder of this specification the natural occurring purine and pyrimidine nucleobases are identified using the following abbreviations: a = adenine; c = cytosine; g = guanine; and t = thymine.

Please amend the paragraph at page 18, lines 4-16 as shown below.

Phosphoramidates were purchased from Cruachem (UK) and the DNA oligomers were assembled on a MilliGen/Biosearch 8700 DNA synthesizer. The ~~A, C, G and T~~ a, c, g, and t-containing PNA monomers were purchased from Biosearch (USA). N'-Boc-aminoethyl glycine was purchased from Biosearch (USA). All PNA oligomers were synthesized on a custom-made PNA synthesizer (Biosearch, USA) by a modified Merrifield method (Christensen, L., Fitzpatrick, R., Gildea, B., Warren, B. and Coull, J. (1994), Innovations and Perspectives in Solid Phase Synthesis, R. Epton, Ed., SPCC (UK) Ltd., Oxford, England; Christensen et al., (1995), J. Pep. Sci., 3, 175) and purified by reverse phase-HPLC. The PNA oligomers were characterized by FAB⁺MS.

Please amend the paragraph at page 20, lines 1-17 as follows.

EXAMPLE 2

Triplex inhibition

The effect of the benzoylated cytosine (c^{Bz} ~~c^{Bz}~~) residue on the hybridization properties of a homopyrimidine peptide nucleic acid was studied. PNA1, ~~H-TTTTCCTCTC-~~ LysNH₂ (~~SEQ ID No. 3~~) H-ttttcctctc-LysNH₂, was synthesized containing either c^{Bz} ~~c^{Bz}~~ in

position 6 (PNA2), or two \underline{c}^{Bz} ϵ^{Bz} residues in positions 6 and 8 (PNA3) or in positions 5 and 6 (PNA4). These PNAs were hybridized to a complementary oligonucleotide in the parallel (ODN1) or the antiparallel (ODN2) configuration and the thermal stability (T_m) of the resulting complexes was determined at pH 5, 7, and 9. The results are set forth in Table 1. Absorbance versus temperature curves were measured at 260 nm in 100 mM NaCl, 10 mM sodium phosphate and 0.1 mM EDTA. Heating rate: 0.5°/minute at 5-90°C. The T_m s in parentheses were obtained by cooling from 90° to 10°C while measuring the absorbance at 260 nm.

On page 21, lines 1 to 5, please amend the paragraph as shown below.

Nucleic acid mimics:

PNA1 = H-ttttcctctc-LysNH₂ ~~H-TTTTCCTCTC-LysNH₂; Seq. ID No: 3~~

PNA2 = H-ttttc^{Bz}tctc-LysNH₂ ~~H-TTTTC^{Bz}TCTC-LysNH₂; Seq. ID No: 4, where ϵ^{Bz} is N~~

PNA3 = H-ttttc^{Bz}tc-LysNH₂ ~~H-TTTTC^{Bz}TCTC^{Bz}TC-LysNH₂; Seq. ID No: 5, where ϵ^{Bz} is N~~

PNA4 = H-ttttc^{Bz}c^{Bz}tctc-LysNH₂ ~~H-TTTTC^{Bz} ϵ^{Bz} TCTC-LysNH₂; Seq. ID No: 6, where ϵ^{Bz} is N~~

Please amend the paragraph spanning page 21, line 25 to page 22, line 2 as shown below.

The complexes with PNA1 and PNA2 showed equal thermal stability at pH 9, *i. e.* for the duplex, thus indicating that the \underline{c}^{Bz} ϵ^{Bz} residue does not interfere with Watson-Crick base pairing in the PNA-DNA duplex. This conclusion was supported by experiments with a \underline{c}^{Bz} ϵ^{Bz} containing mixed purine/pyrimidine sequence using the PNA oligomers H-agtcacctac-LysNH₂ ~~H-AGTCACCTAC-LysNH₂ (PNA5, SEQ ID No. 9)~~ and ~~H-AGTCA ϵ^{Bz} -CTA-C-LysNH₂~~ H-agtcac^{Bz}cta c-LysNH₂ (PNA6, ~~SEQ ID No. 10~~), and is set forth in Table 2. Absorbance versus temperature curves were measured at 260 nm in 100 mM NaCl, 10mM sodium phosphate and 0.1 mM EDTA, at pH 7. Heating rate: 0.5%/min at 5-90°C. The T_m s in parentheses were obtained by cooling from 90 to 10°C while measuring the absorbance at

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260 nm. The hysteresis of the system is the difference between the T_m (10-90°) and T_m (90-10°).

On page 23, please amend the paragraph on page 22, lines 9-14 as follows.

Oligodeoxynucleotides:

ODN3 = 5'-GTAGGTCACT-3'; Seq. ID No: ~~7~~ 3

ODN4 = 5'-GTAGATCACT-3'; Seq. ID No: ~~8~~ 4

Nucleic acid mimics:

PNA5 = H-agtcacctac-LysNH₂ ~~H-AGTCACCTAC-LysNH₂~~; Seq. ID No: ~~9~~

PNA6 = H-agtcac^{Bz}ctac-LysNH₂ ~~H-AGTCACBZCTAC-LysNH₂~~; Seq. ID No: ~~10~~, where C^{Bz} is N